



# COMMONWEALTH of VIRGINIA

## Department of Health

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### Mosquito-borne Viral Diseases in Virginia and among Travelers

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Dear Colleague:

As State Health Commissioner, first let me thank you for all you do to protect and promote the health of the people of Virginia. For my part, I will provide periodic updates on timely, relevant public health issues in an effort to enhance your situational awareness as you work to continually improve patient outcomes. You may be hearing about many important emerging diseases, such as Ebola virus disease (see <http://www.cdc.gov/vhf/ebola/>), however, today, at this time of seasonal change, I am providing an update on arthropod-borne viral infections, or arboviral infections, that occur most commonly through the bites of infected mosquitoes. Among the arboviruses known to be endemic to Virginia, West Nile virus (WNV), La Crosse encephalitis virus (LACV, also known as California encephalitis virus by laboratories), and eastern equine encephalitis (EEE) cause the most arboviral illness in Virginia. Exposure can cause fever and headache and lead to meningitis or encephalitis.

**Chikungunya virus (CHIKV), an imported arbovirus that could potentially affect Virginia residents, has recently surfaced in the Americas.** In December 2013, a case of CHIKV disease was identified in St. Martin Island in the Caribbean Region. By April 4, 2014, more than 3,290 confirmed CHIKV cases were identified in the Caribbean islands and in the South American nation of French Guiana. CHIKV causes symptoms similar to those caused by dengue fever virus (DENV), with high fever (>102°F) often accompanied by headache, nausea, myalgia, arthralgia, and rashes. Chikungunya disease may also cause debilitating polyarthralgia and arthritis; in contrast, dengue fever is more likely to produce hemorrhagic signs and symptoms.

I have three recommendations for your practice related to patients with symptoms consistent with these diseases:

- 1) Enhance your awareness and understanding of emerging arboviral diseases such as CHIKV including important mosquito exposure prevention steps your patients can implement.
- 2) Given the mobility of the population, ensure a complete travel history in your H&P.
- 3) Report any suspected CHIKV to your local health department ([www.vdh.virginia.gov/LHD/index.htm](http://www.vdh.virginia.gov/LHD/index.htm)).

Over the past decade, the number of dengue fever cases identified in Virginia residents with recent travel to endemic countries has increased. Now that chikungunya virus is also established in the Americas, we recommend that you to also be on the lookout for any imported chikungunya cases. Chikungunya disease and dengue fever are both transmitted by several of the same mosquito species, including the Asian



A female *Aedes albopictus* mosquito feeding on a human host. (Centers for Disease Control and Prevention Photo/James Gathany)

tiger mosquito (*Aedes albopictus*), the most common nuisance mosquito in Virginia. Because both CHIKV and DENV can circulate from infected people to local mosquitoes, local transmission of disease could potentially occur in Virginia. By reporting any suspected chikungunya disease cases to your local health district ([www.vdh.virginia.gov/LHD/index.htm](http://www.vdh.virginia.gov/LHD/index.htm)), you can aid in the early identification of the introduction of CHIKV into our mosquito populations, which, in turn, can inform local mosquito control efforts.

Recording a patient's travel history and illness onset date is of utmost importance when an arboviral infection is suspected. Consider chikungunya in patients with acute onset of fever and polyarthralgia with recent travel to endemic areas including the Caribbean. Testing for CHIKV is available through commercial laboratories or through the Centers of Disease Control and Prevention (CDC). To facilitate testing through the CDC, please contact your local health district and refer to [www.cdc.gov/chikungunya/index.html](http://www.cdc.gov/chikungunya/index.html) for specimen submission guidance. For more information, please see the Guidelines for Preparedness and Response for Chikungunya Virus Introduction in the Americas: [www.cdc.gov/chikungunya/index.html](http://www.cdc.gov/chikungunya/index.html).

The approach of Virginia's peak mosquito season is a good reminder to not only maintain vigilance for endemic arboviruses (WNV, LACV, EEE) but also for any imported arboviruses. To prevent all arboviral infections in Virginia, encourage your patients to minimize mosquito bites by avoiding areas infested by mosquitoes or, when in those areas, to use mosquito repellents. As weather permits, patients may also wear long-sleeved clothing and socks to minimize bites. Additional control measures include maintaining screens on windows and doors and regularly dumping containers that hold water and breed mosquitoes, including buckets and birdbaths. In addition, encourage all traveling patients to check CDC travel notices for important health advisories before traveling to specific destinations ([wwwnc.cdc.gov/travel/notices](http://wwwnc.cdc.gov/travel/notices)).

Close coordination and collaboration between governmental public health and the clinical community is a priority of mine as State Health Commissioner. We at VDH are evaluating various communication methods to streamline the dissemination of public health information and improve your ability to have "just in time" public health information relevant to your patient care needs. Those approaches will include the appropriate use of mobile platform technology and social media, and the promotion of public health reporting, including electronically through ConnectVirginia, the statewide health information exchange. My colleagues and I will seek your input and feedback on the most effective and efficient means to communicate. In the meantime, dissemination of timely, important public health will be done through the currently available methods.

Thank you for the work you do each day to protect the health status of all Virginians.

Sincerely,

Marissa J. Levine, MD, MPH, FAAFP  
State Health Commissioner